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CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

Bulletin No. 53, March 30, 1881.

542. "Ashes, from factories in Canada." Sample taken February 10th, from stock of J. Thayer, Dealer, Boston, Mass., by George F. Chapin, Thompsonville.

ANALYSIS.

Sand and Silica,	4.84
Char,	2.98
Oxide of Iron and Alumina,	.57
Lime,	67.42
Magnesia,	1.28
Potash,	.23
Soda,	.42
Phosphoric acid,	.38
Sulphuric acid,	.37
Carbonic acid,	7.05
Moisture,	1.00
Combined water, (of slacked lime).	13.46
	100.00

As to the state of combination we may say that probably the 7 per cent. of carbonic acid is united to 9 per cent. (in round numbers) of lime, making about 16 per cent. of carbonate of lime —that the combined water is united to about 42 per cent. of the lime, making 55 per cent. of hydrate of lime (slacked lime) and that the remainder of the lime—16 per cent.—exists as caustic lime. Accordingly the sample contains 87 per cent. of lime and its carbonate and hydrate. It contains also 9 per cent. of sand, char, oxide of iron and moisture, leaving but 4 per cent. of magnesia, alkalies, phosphoric acid and sulphuric acid.

These "ashes" are, in fact, lime, so slightly admixed with wood ashes as not to differ essentially from oyster shell lime in composition or value whether commercial or agricultural. The presence of so much caustic and slacked lime renders this sample very unlike ashes in its action on the soil. The name is misleading, and evidently we have a material which will scarcely pay the farmers of Connecticut to transport from the "factories in Canada."

The weight of the struck bushel is about 55 lbs, its commercial value is not far from that of an equal weight of slacked oyster shell or other cheap lime.

545. Quinnipiac Coarse Bone. Sampled March 10, from material purchased of the Quinnipiac Co. Wallingford, by Julius W. Yale of Meriden.

MECHANICAL ANALYSIS.

Fine,	smaller than	1-50	inch,	13 per cent
Fine medium,	" "	1-25	"	10 "
Medium,	" "	1-12	"	12 "
Coarse Med.,	" "	1-6	"	15 "
Coarse,	larger than	1-6	"	50 "

CHEMICAL ANALYSIS.

	per cent.	ton value
Organic Nitrogen,	3.84	$ 9.38
Phosphoric acid,	22.32	20.56
Estimated value per ton,		29.94
Cost per ton,		30.00

S. W. JOHNSON, Director.